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SYSTEMATIC REVIEW

Does health and social care provision for the community dwelling older population help to reduce unplanned secondary care, support timely discharge and improve patient well-being? A mixed method meta-review of systematic reviews [version 1; peer review: awaiting peer review]

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Abstract

Background: This study aimed to identify and examine systematic review evidence of health and social care interventions for the community-dwelling older population regarding unplanned hospital admissions, timely hospital discharge and patient well-being.

Methods: A meta-review was conducted using Joanna Briggs and PRISMA guidance. A search strategy was developed: eight bibliographic medical and social science databases were searched, and references of included studies checked. Searches were restricted to OECD countries and to systematic reviews published between January 2013–March 2018. Data extraction and quality appraisal was undertaken by one reviewer with a random sample screened independently by two others.

Results: Searches retrieved 21,233 records; using data mining techniques, we identified 8,720 reviews. Following title and abstract and full-paper screening, 71 systematic reviews were included: 62 quantitative, seven qualitative and two mixed methods reviews. There were 52 reviews concerned with healthcare interventions and 19 reviews concerned with social care interventions. This meta-review summarises the evidence and evidence gaps of nine broad types of health and social care interventions. It scrutinises the presence of research in combined health and social care provision, finding it lacking in both definition and detail given. This meta-review debates the overlap of some of the person-centred support provided by community health and social care provision. Research

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recommendations have been generated by this process for both primary and secondary research. Finally, it proposes that research recommendations can be delivered on an ongoing basis if meta-reviews are conducted as living systematic reviews.

Conclusions: This meta-review provides evidence of the effect of health and social care interventions for the community-dwelling older population and identification of evidence gaps. It highlights the lack of evidence for combined health and social care interventions and for the impact of social care interventions on health care outcomes.

Registration: PROSPERO ID [CRD42018087534](#); registered on 15 March 2018.

Keywords

meta-review, systematic reviews, health care, social care, community-dwelling older population, unplanned admissions, patient well-being

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Introduction

In a recent government report on the UK population, it is predicted that in 50 years' time there will be an extra 8.2 million people aged 65 years and above in the UK. This cohort will comprise over a quarter of the total UK population and equates to the current size of London¹. We are already aware of the impact of the ageing population on health care services. In 2017, 3.5 million (22.2%) of total hospital admissions in England were in the 75 years and over age group. Once in hospital, the same population spent 10.7 million days as inpatients if they were not in the last year of life and 7.5 million days if they were in their last year of life². Once in hospital, there are further issues that need to be considered. Longer, potentially unnecessary hospital stays (delayed discharge) are likely to have a detrimental effect on the older population. NHS Improvement reports that 35% of 70-year-old inpatients experience a decline in function compared to preadmission, and this rises to 65% for people over the age of 90³.

Discharge care for the older population often involves ongoing health care and may also involve social care provision. Social care provision is a balance for local authorities between protecting the most vulnerable in society and the resources available. Insufficient numbers of care home staff and affordable care home places can result in older people having an inappropriately extended hospital stay⁴. The National Audit office estimate that the number of older inpatients no longer requiring acute care but still in hospital is around 2.7 times higher than official statistics suggest⁵. The lack of integration of the health and social care sectors is historical as well as financial and how to improve the situation has been a challenging and controversial debate for decades. In 2014, The Barker Commission concluded that the support needed by older people to navigate through the existing health and social care system needed to be simplified, with services built around people's individual needs. It further concluded that integration of health and social care provision can only happen if traditional definitions and divides are broken down⁶.

In 2017, NHS England set out an ambition to make a national, comprehensive move to integrated health and social care by the development of sustainability and transformation partnerships (STPs)⁷. These STPs are local partnerships of NHS and local authority organisations with the aim of taking more control of local funding and services to improve the health and wellbeing of the population⁸.

The overall aim of this meta-review is to provide an evidence base of efficacy for health care, social care and combined health and social care interventions for the older population in terms of the impact on hospital admissions, timely discharge and patients' quality of life.

The aims of this meta-review were:

- A) To identify effective interventions to deliver health and social care to the community-dwelling older population.
- B) To understand what is important to the community dwelling older population concerning their care, and

important to the professionals providing it, with respect to unplanned hospital admissions, inpatient stays and patient wellbeing.

- C) To identify definitions of social care and combined health and social care for older people that have been used in the systematic review literature.
- D) To identify the components of the health and social care interventions that potentially complement and reduce unplanned hospital admissions, support timely appropriate hospital discharge and enhance well-being.
- E) To identify future mixed-methods synthesis by matching intervention effectiveness with related patient experience to facilitate suggestions for effectiveness or ineffectiveness of intervention approaches and produce research recommendations.

Methods

Search strategy

We were guided by the Joanna Briggs methodology for Joanna Briggs Institute umbrella reviews⁹ and reported according to PRISMA guidance¹⁰. A search strategy was developed in collaboration with the research team with the advice of an experienced information specialist (FB). It combined the following concepts: ([Health care terms or social care terms] AND [overview of reviews filter])¹¹ NOT [LMIC (lower- and middle-income countries) OR children] (*Extended data*, Appendix 1¹²). It is more robust to exclude LMIC countries than to select studies where higher income countries are indexed, since indexing terms for higher income countries are not always added. The search did not specify 'older people' because scoping revealed that not all relevant studies were indexed in this way.

Thesaurus headings for each concept were combined with terms in the title and abstract fields and translated as appropriate for each database. All search results were downloaded to Endnote and de-duplicated. The following databases were searched: The Cochrane Library (Wiley); MEDLINE (OVID); Embase (OVID); Cumulative Index to Nursing and Allied Health Literature (CINAHL) (EBSCO); PsycINFO (OVID); Social Sciences Citation Index (Web of Knowledge); Conference Proceedings Citation Index - Social Science & Humanities (Web of Knowledge); International Bibliography of the Social Sciences (IBSS) (ProQuest); Social Services Abstracts (ProQuest); Social Care Online.

Searches were restricted to Organisation for Economic Co-operation and Development (OECD) countries and to the past five years (January 2013– March 2018). A 2013 limit ensured capturing data from at least previous 30–40 years, as determined by examining relevant 2009/2013 systematic reviews for their search limits. Thus, any studies on recent changes to care provision such as the GP Contract Changes of 2004, the introduction of four-hour wait targets in emergency departments in 2004 and the Health & Social Care Act 2008 were included. There were no language restrictions, provided an English language abstract was available for initial screening. Forward and backward referencing was conducted on all

included full systematic review papers to identify any further relevant systematic reviews. Detailed methods can be found in our PROSPERO registration protocol [CRD42018087534](#).

Types of study

We sought the highest-level evidence available for our research questions. In our health care question, we expected that to be systematic reviews of randomised controlled and controlled trials. In our social care and combined health and social care questions we expected systematic reviews of controlled/observational studies. We used the DARE guidance to assess whether a review can be classified as a systematic review¹³.

Population

Community-dwelling older (≥ 65 years) people. If systematic reviews included data from participants older and younger than 65 years of age, we only included the systematic reviews if the older adult studies were presented separately and formed at least 50% of the included studies. Community dwelling was defined as all residential living including domestic, care, and nursing and sheltered (extra care) housing. Reviews that solely focus on carers or patients in end-of-life care were excluded, as this is beyond the scope of the current review.

Interventions

Health care interventions were those received by a community-dwelling older population that did not involve include an admission into a secondary or tertiary care hospital.

Social care: as defined in the Care Act 2014:

“Adult social care” -

a) includes all forms of personal care and other practical assistance for individuals who by reasons of age, illness, disability, pregnancy, childbirth, dependence on alcohol or drugs or any similar circumstances, are in need of such care or other assistance, but

b) does not include anything provided by an establishment or agency for which Her Majesty’s Chief Inspector of Education, Children’s Services and Skills is the registration authority under section 5 of the Care Standards Act of 2000”¹⁴.

Combined health and social care: any combination of the above, whether provided by separate services but in a co-ordinated way, or through fully integrated services.

Comparators

For the quantitative reviews, any comparator was suitable in the studies described in the included systematic reviews. For the qualitative reviews this was not applicable.

Main outcomes

Outcomes for quantitative systematic reviews were: 1) unplanned hospital admissions/readmissions, 2) length of stay (LOS) and 3) patient well-being.

We were inclusive in our use of patient well-being outcomes and, in addition to measures of the quality of life, we included

measures of social isolation and loneliness. We included systematic reviews of qualitative data if they described: patients’ or health and social care professionals’ experiences of healthcare or social care or combined health and social care relevant to unplanned hospital (re)admission or timely discharge and/or quality of life.

Data extraction

Titles and abstracts were independently assessed for inclusion by two reviewers using pre-defined criteria as detailed above. Disagreements were resolved through discussion and, where necessary, consultation with a third reviewer. For publications of potential relevance, full papers were assessed independently by two reviewers with disagreements resolved as above. Data extraction was undertaken using a customised spreadsheet (*Extended data*, Appendix 2¹²) in Microsoft Excel by one reviewer (SD) with a random sample of 20% independently screened by two other authors.

Data analysis, risk of bias assessment and synthesis approach

We were guided by the Joanna Briggs methodology for umbrella reviews⁹. All data analysis was predominantly descriptive in nature. Where data synthesis was performed it comprised of narrative groupings of data or ideas.

Descriptive analysis of evidence

We narratively presented the aims, specific intervention definition, outcome measured and authors conclusions from both quantitative and qualitative reviews in both text and tables grouped by overall intervention type. If there were more than one systematic review of the same or similar data, we have reported any differences.

Risk of bias (quality) assessment

Quality appraisal of the systematic reviews of quantitative data was conducted using the ROBIS tool¹⁵. This comprises four main domains assessed by signalling questions: eligibility, identification of studies, collection/appraisal of data, and synthesis and findings. Quality appraisal of systematic reviews of qualitative data and mixed methods reviews was conducted using the GRADE-CERQual tool¹⁶. This approach includes four components for assessing how much confidence to place on the findings: the methodological limitations of the individual qualitative studies contributing to the review finding; the relevance to the review question of the individual studies contributing to the review finding; the coherence of the review finding; and the adequacy of data supporting a review finding.

Quality appraisal was conducted independently by two reviewers for a 10% sample of included systematic reviews. There was a high level of agreement between the reviewers (94%), therefore the remaining reviews were appraised by one reviewer (SD) and checked by a second reviewer (AH). Any discrepancies were resolved through consensus. We did not exclude on quality but took account of the quality of evidence when discussing the findings of the included systematic reviews.

Evidence map (addressing Aims A & B)

An evidence map was produced detailing volume of evidence (number of reviews) per intervention per outcome measure and showing gaps in evidence.

Evidence summary (addressing Aims A & B)

An evidence summary was produced for interventions which had a positive or no impact on our outcomes of interest. Positive or no impact were defined as any stated by the authors' results and conclusions at systematic review level. The majority of these were based on evidence from A) *meta-analysis* of randomised controlled trial data; B) *narrative evidence* predominantly from RCT data, but no meta-analysis performed, C) *limited evidence* means two or less RCTs, D) *low quality evidence* means predominantly non-RCT evidence. A small number of qualitative reviews were identified and where present are denoted by Q.

Definitions of combined health and social care (addressing Aim C)

If present these were collated in one table and discussed within the results and discussion section.

Complementary components of health and social care interventions (Addressing Aim D).

These were described in the results and the discussion sections.

Future mixed methods synthesis (addressing Aim E).

We identified existing and future mixed methods synthesis of evidence to facilitate suggestions for future research.

Results

Overview

There were 71 systematic reviews included in this meta-review: 62 quantitative reviews, seven qualitative reviews and two mixed methods reviews (*Extended data*, Appendix 3: PRISMA diagram¹²) 52 reviews were concerned with health care interventions, of which 46 were quantitative reviews and six were qualitative reviews. 19 reviews were concerned with social care interventions of which 16 were quantitative, two were mixed methods and one qualitative review. *Extended data*, Table 1¹² contains a description of the included reviews.

Patient populations. Systematic reviews of health care interventions focused on the older population (17), chronic obstructive pulmonary disease (COPD) (12), heart failure/atrial fibrillation (10) with a smaller number of reviews on stroke (2), dementia (1), Parkinson's (1), vertebral compression fractures (1) and mixed chronic conditions (2). In addition, there were six composite reviews covering broader topic areas. Systematic reviews of social care included the older population (16) and dementia (3).

Types of interventions. Health care interventions were organised into three groups: *Care in the community* (Reviews 1–35)^{17–51}, *Urgent care at the community/hospital interface* (Reviews 36–39)^{52–55} and *Discharge and transitional care at the hospital/community interface* (Reviews 2, 40–52)^{18,56–68}. Social care interventions were organised into two groups: *formal social*

care (Reviews 53–57)^{69–73} and *synthetic social support* (Reviews 58–71)^{74–87}.

Risk of bias in reviews

Health care interventions. Of the 46 quantitative reviews of health care interventions, 28 (61%) were determined to be at low risk of bias across all four domains, 13 (28%) had a least one domain determined to be unclear (due to lack of information), and five (11%) had at least one domain (predominantly domains 2 and 3) determined to be at high risk (see *Extended data*, Table 2a¹²).

There were six qualitative reviews concerned with health care interventions and of these, five were determined to be at low concern across all four domains and high confidence overall. The remaining one review was determined to be of moderate concern over domains two and three and therefore of moderate confidence.

Social care interventions. Of the 16 quantitative reviews of social care interventions, eight (50%) were determined to be at low risk of bias across all four domains, four (25%) had one domain determined to be unclear (mostly domain 3) and four (25%) were determined to have at least one domain at high risk (mostly domain 3 and 4) (see *Extended data*, Table 2b¹²).

There were one qualitative and two mixed methods reviews concerned with social care interventions and of these, one was determined to be at low concern across all four domains and high confidence. The other review was determined to be a mixture of moderate and low concern and of moderate confidence.

Addressing Aims, A and B: Effectiveness and peoples' experiences of health and social care interventions

In this section, the following are summarised: 1) evidence and evidence gaps for health and social care interventions per condition and outcome, and 2) the effectiveness of interventions and people's experiences of them. Finally, detailed descriptions of the included systematic reviews are given.

1. Evidence and evidence gaps by intervention type and outcome

The majority of included health care systematic reviews measured hospital admissions as an outcome (33/52). Two formal social care reviews measured hospital admissions (2/5). No synthetic social support reviews measured hospital admissions (0/14) (*Extended data*, Table 3 shows an evidence map¹²).

Timely discharge was only measured in the discharge care intervention reviews (2/14) and was not present in any social care review (0/19).

Within health care systematic reviews, quality of life was measured in 20/52 reviews and was most prevalent in the care in the community intervention reviews, particularly self-management, exercise/rehabilitation and medication review (17/35), as opposed to 0/4 in the urgent care reviews and 3/14 in the discharge care reviews. Quality of life was measured in 17/19 social

care intervention reviews of which 10 were focused on social isolation and loneliness.

Only 7/71 of the included systematic reviews were of qualitative data (people's experiences) and 2/71 contained a combination of quantitative and qualitative data with similar representation across health (6/52) and social care (3/19) reviews.

2. Evidence summary by condition and outcome

Hospital admissions

Positive benefit. The evidence for positive benefit of interventions in reducing hospital admissions is derived from the health care evidence across community, urgent and discharge care interventions focusing on the older population, COPD and heart failure patients (*Extended data*, Table 4 provides a summary of the evidence¹²).

In the older population there is meta-analysis-level evidence for positive benefit for both discharge/transitional care for all and influenza vaccination for nursing home residents. For COPD patients there is meta-analysis level evidence for positive benefit for rehabilitation/post-rehabilitation support, influenza vaccination, discharge/transitional care and hospital at home (in place of admission). For heart failure patients there is meta-analysis level evidence for positive benefit for discharge/ transitional care and hospital-initiated case management.

No benefit. There is meta-analysis level evidence for no benefit in terms of hospital admissions for the following health interventions. For the general population, community case management, medication review and nurse-led geriatric ED care confers no benefit. For COPD patients, self-management intervention confers no benefit and for heart failure patients supervised exercise and community case management confers no benefit.

Timely discharge

Positive benefit. There is meta-analysis level evidence for positive benefit of hospital-initiated case management for heart failure patients.

No benefit. There is no meta-analysis level evidence for any health or social care intervention in any population supporting no benefit for timely discharge.

Quality of life

Positive benefit. The evidence for positive benefit of interventions in quality of life is present in both health and social care interventions with meta-analysis level evidence for the older population, COPD, heart failure, stroke and dementia patients. For the older population, this includes self-management and reablement interventions; for COPD patients, this includes breathing techniques, Tai Chi and hospital at home (in place of admission) interventions; for heart failure patients, this includes general exercise, Tai Chi, hospital at home (in place of admission), discharge and transitional care; for stroke patients this includes self-management.

No benefit. There is meta-analysis level evidence that supports no benefit for quality of life for the older population with

medication review and for COPD patients with post rehabilitation support.

Peoples' experiences (qualitative outcomes)

There are nine included systematic reviews of qualitative evidence or a combination of quantitative and qualitative data (mixed methods) evidence: self-management and case management for heart failure patients, self-management for stroke patients, transitional and discharge interventions for older people, rehabilitation and exercise for COPD patients, formal social care (mixed methods) for the older population and reablement (mixed methods) for the older population. These are described in *Extended data*, Table 1¹² and discussed in more detailed in aim E.

Addressing Aims C and D: definitions of social care and combined health and social care and identifying complementary components of health and social care interventions

Definitions. Definitions of specific social care interventions are listed in *Extended data*, Appendix 4¹² and include reablement, personal support and synthetic social support.

Definitions of combined health and social care were poorly described in the included systematic reviews (*Extended data*, Appendix 4¹²). All 13 definitions identified came from the health care systematic reviews with eight describing care in the community interventions and five describing discharge/transitional interventions. Combined health and social activity were implied as opposed to specifically mentioning integrated working in all these definitions with the exception of Review 41⁵⁷. This review included discharge and transitional interventions defined as 'interventions that could be implemented in any health or social care setting (primary, secondary or community care), as long as they crossed the boundary between two or more settings. The community setting encompassed care given in the community, in patient homes or by social care professionals.'

Complementary components of health and social care interventions. Aim D was to identify complementary components of care across health and social care interventions. By examining the definitions of individual health and social care interventions it is clear to see some overlap of components for the social care interventions reablement and personal assistance with aspects of health professional-driven interventions of self - management, case management, discharge/transitional care and rehabilitation (*Extended data*, Appendix 4¹²). These interventions included a home-based, tailored/individualized (patient-centered) approach, one to one, face to face, co-ordination of integrated care to support people to live their lives as well as possible for as long as needed.

Addressing Aim E: Future mixed methods synthesis

Mixed methods synthesis that matched evidence of intervention effectiveness with related patient experience evidence were identified (*Extended data*, Table 5¹²). This was limited because only seven systematic reviews with qualitative data^{25,27,29,43,61,62,70} and two mixed methods reviews^{78,85} were included in this meta review.

Two systematic reviews of qualitative evidence were conducted as part of segregated mixed methods reviews. Stroke and self-management (Reviews 10 & 11)^{26,27} was conducted by the same authors as was heart failure and case management (Reviews 26 & 27)^{42,43}. In the latter case, the qualitative synthesis sought to understand the impact of case management on hospital admissions⁴² for patients with heart failure in a qualitative synthesis⁴³.

Two of the systematic reviews were conducted as integrated mixed methods reviews examining social care for the older person and reablement for the older person^{69,71}. Social care for the older person is also evaluated in one systematic review of qualitative data (Review 54)⁷⁰ as is reablement with a systematic review of quantitative data (Review 56)⁷².

There are two future mixed methods synthesis identified by the meta-review that could be conducted: 1) Rehabilitation and post rehabilitation support for COPD patients and 2) Discharge/transitional care for the older population 3) Rehabilitation and post rehabilitation support for patients with COPD is evaluated in three effectiveness systematic reviews (Reviews 12, 14, 15)^{28,30,31} with a complementary systematic review of qualitative data in Review 13²⁹. Discharge and transitional care for the older person is evaluated in four effectiveness reviews (Reviews 40-43)⁵⁶⁻⁵⁹ with two complementary systematic reviews of qualitative data in Reviews 45 and 46^{61,62}.

Discussion

This meta-review describes and evaluates health and social care provision aiming to reduce unplanned secondary care, support timely discharge, and improve patient well-being for the community dwelling older population.

There were 71 systematic reviews included: 62 quantitative reviews, seven qualitative reviews and two mixed methods reviews. Of these, 52 reviews were concerned with health care interventions, and 19 reviews were concerned with social care interventions. There was very little content of these included reviews providing evidence for combined health and social care for the older person which reflects traditional mindsets in practice and research both in the UK and elsewhere⁸. The reviews included health care interventions targeting the older population as well as specific patient populations such as COPD, heart failure and dementia patients. The reviews of social care interventions predominantly included the older population with some of the studies within the reviews, including younger populations. There were fewer reviews of social care than health care, and within these reviews, there were fewer RCTs than in the health care reviews. Quality appraisal of the health and social care reviews shows that a greater proportion of the health care reviews compared to social care reviews were of a higher methodological standard. This was expected, as systematic review methodology is less common in social care research⁸⁸. However, it is of note that 50% of the social care reviews were determined to be of low risk of bias overall.

This meta-review maps out intervention research by population and outcome, highlighting evidence but also identifies evidence gaps. Some of these evidence gaps are not of value to pursue; for example, we would not expect most community and urgent care interventions to improve timely discharge. It is unlikely that synthetic social support would impact on hospital admissions.

However, there is an interesting dichotomy in intervention research and measurement in quality of life outcomes; whilst it is a widespread and obvious outcome for self-management, exercise and rehabilitation interventions, it is less prevalent in more medical care provision such as case management, urgent care, discharge and transitional interventions. Patient involvement and satisfaction with care is not only important for patients' quality of life but also can impact the success of an intervention⁸⁹. The qualitative data exploring patient and health professional experience when available, can also provide unique insight regarding a specific intervention⁹⁰.

Social care and synthetic social support evidence in this meta-review tends to focus on subjective outcomes and yet it could be of value for social care provision research to measure more objective outcomes such as the use of care services. The evidence for effectiveness in this meta-review is dominated by hospital admissions and quality of life. Timely discharge is more likely to be the focus of hospital-based care. Across the 71 included systematic reviews, we only identified seven relevant reviews of qualitative evidence and two reviews of mixed-methods evidence. Those interventions measuring hospital admissions were health care focused, and the included systematic reviews were generally supported by a meta-analysis of RCTs. Quality of life outcomes was present in both health and social care systematic reviews; notably, there was no meta-analysis level evidence in social care or synthetic social support interventions reviews. Social care data comprised few RCTs in combination with less rigorous study types of a heterogeneous group of interventions.

A total of 13 reviews focused on combined or integrated health and social care interventions, with only one systematic review having a clear, integrated health and social care definition for its included studies⁵⁷. Despite the fact we know that health care works with social care within interventions described in the many of the included systematic reviews of health interventions, e.g. ED, discharge and transitional care interventions, there is little mention of social care involvement in these health research publications⁹¹. Although we are looking at systematic review-level evidence, this likely reflects the individual study intervention descriptions. This reinforces the view that we persist in researching health care and social care as separate entities and are not acknowledging the combined activities that already exist. Hopefully, we are on the cusp of change with combined health and social care funding coming in to place⁹². It is also important to acknowledge that more pragmatic evaluation work of health and social care at a local level may be addressing this better.

Finally, we identified mixed methods evidence synthesis within the meta-review. This aim had two objectives. Firstly, to demonstrate the utility of mixed method synthesis in this topic area. For example, the evidence for case management for heart failure both examines effectiveness data for potential reduction of hospital admissions as well as qualitative data exploring patients' (and health professionals') experiences of case management^{42,43}. Secondly, to identify future mixed-method synthesis, i.e. research recommendations for future work. Several topic areas were identified across both health and social care (*Extended data*, Table 5¹²) with notable examples being the use of quantitative (effectiveness) and qualitative (patient experience) in discharge and transitional care^{56–59,61,62}.

There are limitations to conducting a meta-review on such a broad topic area. This meta-review included systematic reviews published in the past five years. This means if a topic area had been reviewed with a definitive outcome prior to this, the evidence does not appear in this meta-review. Some interventions may not have enough primary RCTs or studies generally to warrant a systematic review, e.g. diuretic management of heart failure patients in the community.

A meta-review can only really express a direction of effect of evidence for an intervention type, and the detail is needed to get the full picture. An example of this is the evidence for nurses and geriatricians working in emergency departments. At meta-review level, the evidence suggests that nurses do not impact on patient admission, but geriatricians do. At the study level, we can see that the nurse studies are of high quality and component analysis suggests that the impact depends on the type of nurse and the context⁵³. The geriatrician data comprises lower quality observational studies and therefore needs replication with RCTs⁵⁵.

The searches for this meta-review were conducted in 2018, reflecting the length of time needed to synthesise such a large volume of evidence. The fact that the meta-review has included systematic reviews and not primary studies give us confidence that the overall evidence base of the interventions is unlikely to have significantly changed. However, this topic area is an excellent candidate for becoming a living systematic review to continue to inform future primary and secondary studies^{92,93}.

In conclusion, this meta-review of health and social care interventions for the older population provides evidence about the overall effect and the evidence gaps of the included interventions, with qualitative data for selected topics. It also highlights the lack of evidence, detail and discussion for

combined health and social care and the lack of high-quality evidence for the impact of social care interventions on care provision outcomes. This meta-review will support future research in health and social care in the ageing population.

Data availability

Underlying data

All data underlying the results are available as part of the article and no additional source data are required.

Extended data

Figshare: Does health and social care provision for the community dwelling older population help to reduce unplanned secondary care, support timely discharge and improve patient well-being? A mixed method meta-review of systematic reviews. <https://doi.org/10.6084/m9.figshare.12688487.v1>¹².

This project contains the following extended data:

- Table 1- Health and social care interventions systematic review-aims, outcomes and conclusions.
- Table 2- Risk of bias of included studies.
- Table 3- Evidence map of health and social care interventions of included systematic reviews based on conditions and outcomes.
- Table 4- Evidence summary at systematic review level for efficacy for health and social care interventions by outcome.
- Table 5- Mixed methods evidence identified.
- Appendix 1- Example search strategy.
- Appendix 2- Example data extraction form.
- Appendix 3- PRISMA Flowchart.
- Appendix 4- Definitions of interventions.

Reporting guidelines

Figshare: PRISMA checklist (Appendix 5) for 'Does health and social care provision for the community dwelling older population help to reduce unplanned secondary care, support timely discharge and improve patient well-being? A mixed method meta-review of systematic reviews'. <https://doi.org/10.6084/m9.figshare.12688487.v1>¹².

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